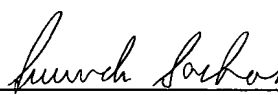


FORM PTO-1390 (Modified) U.S. PATENT AND TRADEMARK OFFICE; U.S. DEPARTMENT OF COMMERCE		293000US40PCT
TRANSMITTAL LETTER TO THE UNITED STATES		U.S. APPLICATION NO. (if known, see 37 CFR 1.5)
DESIGNATED/ELECTED OFFICE (DO/EO/US)		10/588774
CONCERNING A SUBMISSION UNDER 35 U.S.C. 371		
INTERNATIONAL APPLICATION NO. PCT/JP05/11399	INTERNATIONAL FILING DATE June 15, 2005	PRIORITY DATE CLAIMED June 15, 2004 earliest
TITLE OF INVENTION HEAT EXCHANGER		
APPLICANT(S) FOR DO/EO/US Shigeharu ICHIYANAGI, et al.		
Applicant herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information:		
<ol style="list-style-type: none"> <li>1. <input checked="" type="checkbox"/> This is a <b>FIRST</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>2. <input type="checkbox"/> This is a <b>SECOND</b> or <b>SUBSEQUENT</b> submission of items concerning a submission under 35 U.S.C. 371.</li> <li>3. <input checked="" type="checkbox"/> This is an express request to begin national examination procedures (35 U.S.C. 371(f)). The submission must include items (5), (6), (9) and (24) indicated below.</li> <li>4. <input checked="" type="checkbox"/> The US has been elected (Article 31).</li> <li>5. <input checked="" type="checkbox"/> A copy of the International Application as filed (35 U.S.C. 371(c)(2))                         <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input checked="" type="checkbox"/> has been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> is not required, as the application was filed in the United States Receiving Office (RO/US).</li> </ol> </li> <li>6. <input type="checkbox"/> An English language translation of the International Application as filed (35 U.S.C. 371(c)(2)).                         <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> is attached hereto.</li> <li>b. <input type="checkbox"/> has been previously submitted under 35 U.S.C. 154(d)(4).</li> </ol> </li> <li>7. <input checked="" type="checkbox"/> Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))                         <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> are attached hereto (required only if not communicated by the International Bureau).</li> <li>b. <input type="checkbox"/> have been communicated by the International Bureau.</li> <li>c. <input type="checkbox"/> have not been made; however, the time limit for making such amendments has NOT expired.</li> <li>d. <input checked="" type="checkbox"/> have not been made and will not be made.</li> </ol> </li> <li>8. <input type="checkbox"/> An English language translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).</li> <li>9. <input checked="" type="checkbox"/> An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)).                         <ol style="list-style-type: none"> <li>a. <input type="checkbox"/> If the declaration is in a language other than the English language, it is accompanied by an English translation. The translation is accurate (37 CFR 1.69)</li> </ol> </li> <li>10. <input type="checkbox"/> An English language translation of the annexes of the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371 (c)(5)).</li> <li>11. <input checked="" type="checkbox"/> A copy of the International Preliminary Examination Report (PCT/IPEA/409).</li> <li>12. <input checked="" type="checkbox"/> A copy of the International Search Report (PCT/ISA/210).</li> </ol> <p><b>Items 13 to 23 below concern document(s) or information included:</b></p> <ol style="list-style-type: none"> <li>13. <input checked="" type="checkbox"/> An Information Disclosure Statement under 37 CFR 1.97 and 1.98.                         <ol style="list-style-type: none"> <li>a. <input checked="" type="checkbox"/> PTO-1449</li> <li>b. <input checked="" type="checkbox"/> Cited References ( 2 )</li> <li>c. <input type="checkbox"/> Statement of Relevancy</li> <li>d. <input type="checkbox"/> List of Related Cases.</li> </ol> </li> <li>14. <input type="checkbox"/> An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.</li> <li>15. <input checked="" type="checkbox"/> A <b>FIRST</b> preliminary amendment.</li> <li>16. <input type="checkbox"/> A <b>SECOND</b> or <b>SUBSEQUENT</b> preliminary amendment.</li> <li>17. <input checked="" type="checkbox"/> An Application Data Sheet under 37 CFR 1.76.</li> <li>18. <input type="checkbox"/> A substitute specification.</li> <li>19. <input checked="" type="checkbox"/> A power of attorney and/or change of address letter.</li> <li>20. <input type="checkbox"/> A computer-readable form of the sequence listing in accordance with PCT Rule 13ter.2 and 37 CFR 1.821 - 1.825.</li> <li>21. <input type="checkbox"/> A second copy of the published International Application under 35 U.S.C. 154(d)(4).</li> <li>22. <input type="checkbox"/> A second copy of the English language translation of the International Application under 35 U.S.C. 154(d)(4).</li> <li>23. <input checked="" type="checkbox"/> Other items or information: Notice of Priority (2)/PCT/IB/304</li> </ol>		

U.S. APPLICATION NO. (if known, see 37 CFR 1.5) <b>10/588774</b>		INTERNATIONAL APPLICATION NO. PCT/JP05/11399		ATTORNEY'S DOCKET NUMBER 293000US40PCT	
The following fees are submitted:				<b>CALCULATIONS</b>	
				<b>PTO USE ONLY</b>	
24. <input checked="" type="checkbox"/> Basic national fee..... \$300				\$300.00	
25. <input checked="" type="checkbox"/> Examination fee If the written opinion prepared by ISA/US or the international preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4) .... \$0 All other situations..... \$200				\$200.00	
26. <input checked="" type="checkbox"/> Search fee If the written opinion of the ISA/US or the International preliminary examination report prepared by IPEA/US indicates all claims satisfy provisions of PCT Article 33(1)-(4)..... \$0 Search fee (37 CFR 1.445(a)(2)) has been paid on the international application to the USPTO as an International Searching Authority..... \$100 International Search Report prepared by an ISA other than the US and provided to the Office or previously communicated to the US by the IB ..... \$400 All other situations..... \$500				\$400.00	
<b>TOTAL OF 24, 25 AND 26 =</b>				<b>\$900.00</b>	
<input type="checkbox"/> Additional fee for specification and drawings filed in paper over 100 sheets (excluding sequence listing or computer program listing filed in an electronic medium). The fee is \$250 for each additional 50 sheets of paper or fraction thereof.					
Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof (round up to a whole)	RATE		
- 100 =	/ 50 =		x \$250.00	\$	
<input type="checkbox"/> Surcharge of \$130.00 for furnishing any of the search fee, examination fee, or the oath or declaration after the date of commencement of the national stage (37 CFR 1.492(h)).				\$	
CLAIMS	NUMBER FILED	NUMBER EXTRA	RATE		
Total claims	11 - 20 =	0	x \$50.00	\$0.00	
Independent claims	1 - 3 =	0	x \$200.00	\$0.00	
MULTIPLE DEPENDENT CLAIMS (if applicable) <input type="checkbox"/> + \$360.00				\$	
<b>TOTAL OF ABOVE CALCULATIONS =</b>				<b>\$900.00</b>	
<input type="checkbox"/> Applicant claims small entity status. See 37 CFR 1.27. Fees above are reduced by 1/2.					
<b>SUBTOTAL =</b>				<b>\$900.00</b>	
<input type="checkbox"/> Processing fee of \$130.00 for furnishing the English translation later than 30 months from the earliest claimed priority date (37 CFR 1.492(i)).				+	\$
<b>TOTAL NATIONAL FEE =</b>				<b>\$900.00</b>	
<input type="checkbox"/> Fee for recording the enclosed assignment (37 CFR 1.21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). \$40.00 per property +				+	\$
<input type="checkbox"/> Petition fee of \$1,500.00 for Petition to Revive (37 CFR 1.137 (b)).				+	\$
<b>TOTAL FEES ENCLOSED =</b>				<b>\$900.00</b>	
				<b>Amount to be refunded:</b>	\$
				<b>Amount to be charged:</b>	\$
a. <input type="checkbox"/> A check in the amount of \$_____ to cover the above fees is enclosed. b. <input type="checkbox"/> Please charge my Deposit Account No. <u>15-0030</u> in the amount of \$_____ to cover the above fees. c. <input checked="" type="checkbox"/> The Director is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. <u>15-0030</u> . A duplicate copy of this sheet is enclosed. d. <input checked="" type="checkbox"/> Fees are to be charged to a credit card. <b>WARNING:</b> Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038. <b>NOTE:</b> Where an appropriate time limit under 37 CFR 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the International Application to pending status. SEND ALL CORRESPONDENCE TO:  <div style="display: flex; justify-content: space-between;"> <div> <b>CUSTOMER NUMBER</b>  <b>22850</b>  Tel. (703) 413-3000  Fax. (703) 413-2220  (OSMMN 1/06) </div> <div style="text-align: right;">   SIGNATURE  <b>Richard D. Kelly</b>  NAME  <b>27,757</b>  REGISTRATION NUMBER </div> <div style="text-align: right;"> <b>Surinder Sachar</b>  Registration No. 34,423 </div> </div>					

Docket No. 293000US40PCT

IN RE APPLICATION OF: Shigeharu ICHIYANAGI, et al.

- SERIAL NO: New U.S. PCT Application Based on PCT/JP05/11399

FILED: Herewith

FOR: HEAT EXCHANGER

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Transmitted herewith is an amendment in the above-identified application.

☒ No additional fee is required

☐ Small entity status of this application under 37 C.F.R. §1.9 and §1.27 is claimed.

☒ Additional documents filed herewith: PCT Transmittal Letter/Application Data Sheet/Notice of Priority (2)/Declaration Preliminary Amendment/PCT/IB/304/Information Disclosure Statement/PTO-1449 International Search Report/References Cited (2) Credit Card Payment Form for \$900.00 International Preliminary Report on Patentability

The Fee has been calculated as shown below:

CLAIMS	CLAIMS REMAINING		HIGHEST NUMBER PREVIOUSLY PAID	NO. EXTRA CLAIMS	RATE	CALCULATIONS	
TOTAL	11	MINUS	20	0	x \$50 =	\$0.00	
INDEPENDENT	1	MINUS	3	0	x \$200 =	\$0.00	
		<input type="checkbox"/> MULTIPLE DEPENDENT CLAIMS			+ \$360 =	\$0.00	
		TOTAL OF ABOVE CALCULATIONS					\$0.00
		<input type="checkbox"/> Reduction by 50% for filing by Small Entity					\$0.00
		TOTAL					\$0.00

☐ A check in the amount of **\$0.00** is attached.

☐ Credit card payment form is attached to cover the fees in the amount of **\$0.00**

☒ Please charge any additional Fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

☒ If these papers are not considered timely filed by the Patent and Trademark Office, then a petition is hereby made under 37 C.F.R. §1.136, and any additional fees required under 37 C.F.R. §1.136 for any necessary extension of time may be charged to Deposit Account No. 15-0030. A duplicate copy of this sheet is enclosed.

OBLON, SPIVAK, McCLELLAND,  
MAIER & NEUSTADT, P.C.

*Richard D. Kelly*

Richard D. Kelly  
Registration No. 27,757

Customer Number  
**22850**

Tel. (703) 413-3000  
Fax. (703) 413-2220  
(OSMMN 05/03)

Surinder Sachar  
Registration No. 34,423